

APPLICATION
FOR
UNITED STATES LETTERS PATENT

TITLE: HIGH-AFFINITY MELATONIN RECEPTOR ^{AGONIST METHOD} ~~AND USES~~
~~THEREOF~~

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AGONIST METHOD

HIGH-AFFINITY MELATONIN RECEPTORS AND USES THEREOF

Cross-Reference to Related Applications

5 This application is a divisional of U.S. Application No. 08/466,103 filed June 6, 1995
This application is a continuation-in-part of our now U.S.
earlier filed (pending) U.S. application Serial No. Patent 5,856,124.
08/319,887 filed October 7, 1994 which application is a
continuation-in-part of our earlier filed (pending) U.S.
application Serial No. 08/261,857 filed June 17, 1994 which
10 application is incorporated herein by reference in its
entirety and to which application we claim priority under
35 USC §120.

Statement as to Federally Sponsored Research

15 This invention was made at least in part with funds
from the Federal government, and the government therefore
has rights in the invention.

Background of the Invention

The invention relates to nucleic acids and their
encoded high-affinity melatonin receptor proteins.

20 The high-affinity melatonin receptor is a membrane
protein that is coupled to guanine nucleotide binding
proteins (G proteins). G proteins, in turn, communicate
ligand-activated receptor signals to the appropriate
intracellular effector system(s). The hormone, melatonin,
25 inhibits adenylyl cyclase causing a decrease in
intracellular cyclic AMP (cAMP) concentration.

Melatonin, the principal hormone of the vertebrate
pineal gland, elicits potent neurobiological effects.
Melatonin influences circadian rhythm and mediates the